Crestron CH-DIM4-D9
Dimmer Control Interface (DIN Rail)

Operation Guide

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Description

Figure 1: CH-DIM4-D9

Functional Description

The CH-DIM4-D9 is an analog output interface for control of fluorescent dimmable ballasts. 4 Cut-off relay's are implemented to cut the 230V feed to the load if the analog output is <1VDC. This is to prevent the Fluorescent light from flickering (Figure 1).

- 4 analog outputs 0-10VDC or 1-10VDC for control of Electronic ballasts.
- Each analog output can handle a max output current of 25mA; all 4 outputs together maximum 100mA (per output +-/ 25 ballast's).
- Analog Outputs are each settable to Sink (1-10V) or Source (0-10V)
- 4 relays for Cut-off purpose to prevent the load of flickering, each rated 250VAC/16Amp (cut off value can be programmed).
- Red led feedback per Cut-off relay.
- 1 override input (dry contact) or dipswitch that triggers all outputs to 10VDC for testing or emergency reasons
- Cresnet unit with rotary switches for NET-ID settings.
- DIN rail mountable

Technical data

Dimensions	:	160 x 90 x 58 mm (L x B x H)
DIN norm	:	9 Modules 160 mm, DIN43880
Cut-out size electrical cabinet	:	160 mm x 45 mm (L x H)
Weight	:	350 g
Color	:	Enclosure, grey RAL7035 , front black
Material	:	Self-extinguishing NORYL
Mounting	:	DIN rail DIN EN 50022
Connectors Ouputs	:	Mini Phoenix 3.5mm 5 Pole
Connectors Cresnet	:	Mini Phoenix 3.5mm 4 Pole (2 pieces)
Connectors Override	:	Mini Phoenix 3.5mm 2 Pole
Connectors Relay	:	Phoenix 0.2 to 4mm^2 cable section
Addressing Cresnet	:	2 Rotary switches
Power	:	24 VDC, Cresnet
Current consumption	:	max. 170 mA
Cresnet Power factor	:	5W
Crestron Device Library	:	CNLDAB-4A
Outputs	:	4 channels SINK (1-10V) or SOURCE (0-10V).
Relays	:	4 Cut-off outputs with 1 contact each max. 250VAC / 16A. **(For resistive loads) with VDR 385V**
Status	:	1 blue LED for Power status 1 Green LED for Cresnet status 4 red LED's for relay status
Test / Override	:	Via a dry contact or a dip switch all the outputs are placed to 10VDC (100%)
Includes	:	Interface with 2x 4, 1x 5 and 1x 2 Pole Mini-Phoenix connectors.

Front view

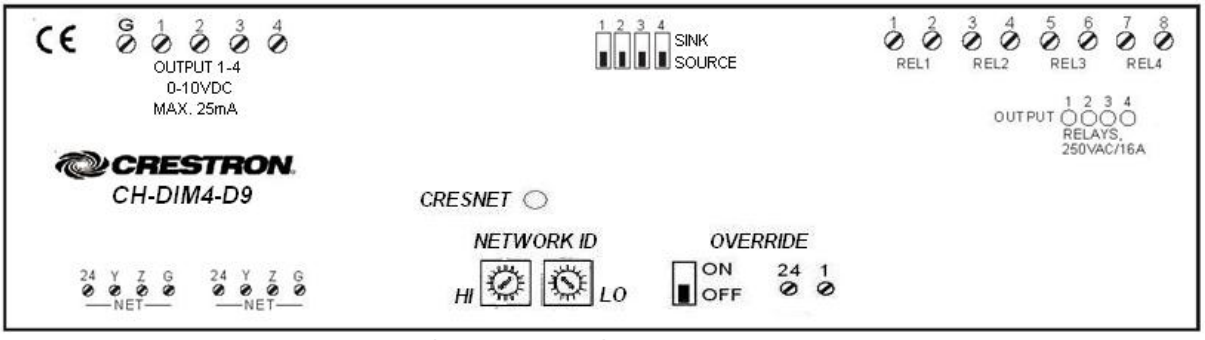

Figure 2: Front view CH-DIM4-D9

Setup

Example wiring diagram

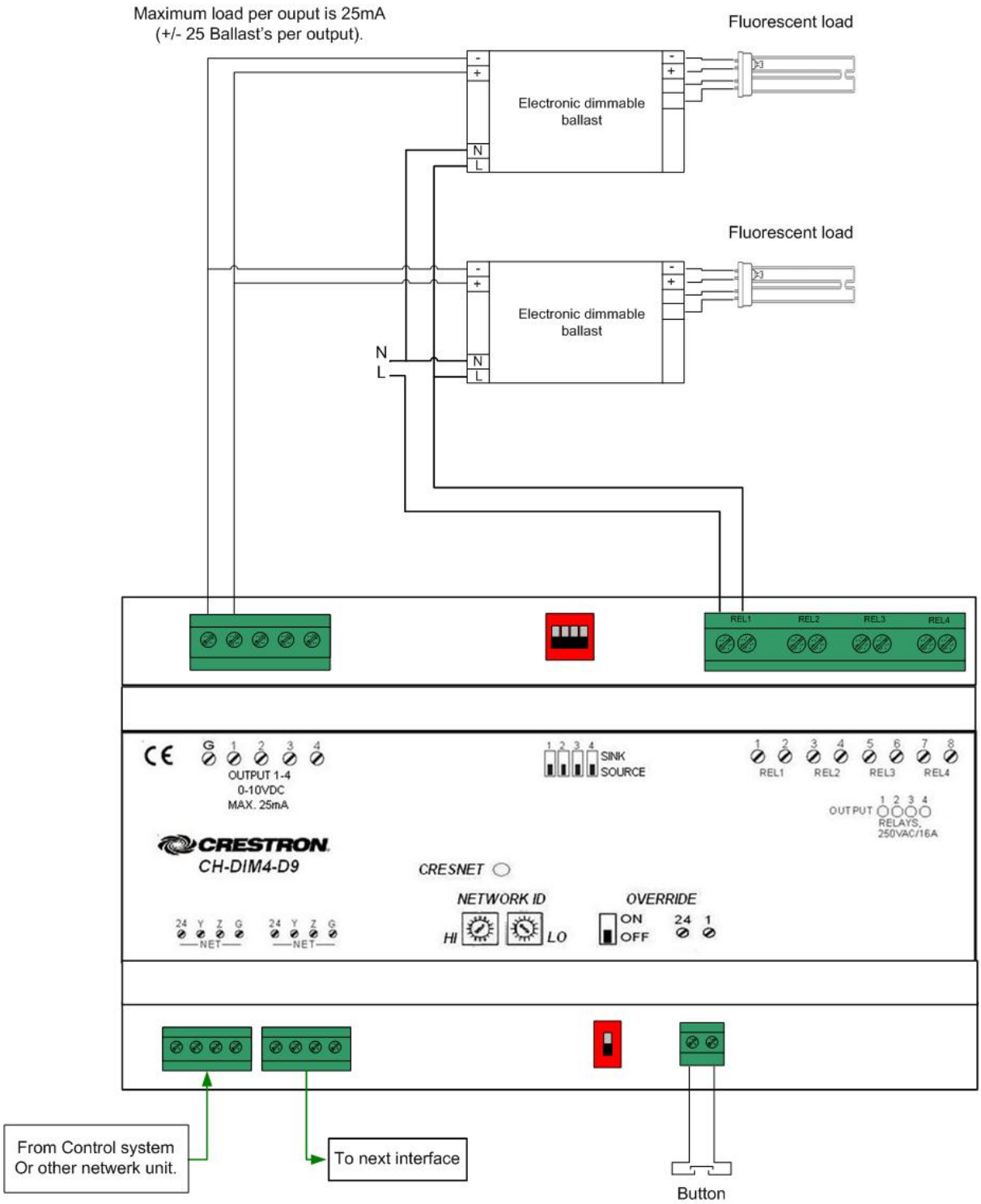

Figure 3: Connection diagram CH-DIM4-D9

Cresnet Connections

Note: Before making any connections, CRESTRON recommends that all power is off and the installer reviews the latest revision of the network interconnection drawing (DOC5411i).

Refer to figure 4 and connect the CH-DIM4-D9 to the Cresnet network via a Cresnet network cable (CRESNET cable). This cable is not supplied with the CH-AO12-D5 but can be obtained from Crestron International.

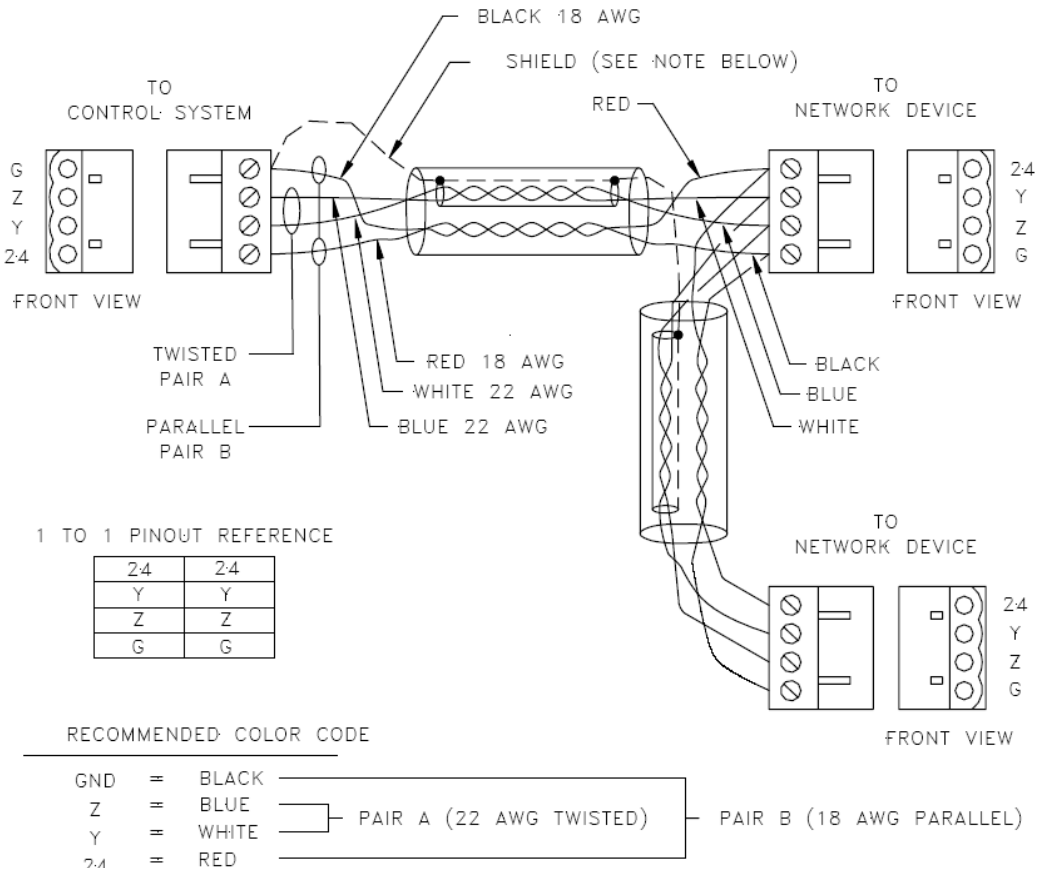

Figure 4: CH-DIM4-D9 Cresnet Hook-up

Cresnet ID

Every equipment and user interface within the network requires a unique identity code (NET ID). These codes are recognized by a two-digit hexadecimal number from 03 to FE. The NET ID of each unit must match an ID code specified in the Simpl Windows program.

Use the following method to change NET ID of the CH-DIM4-D9

1. Locate the two miniature rotary switches labeled HIGH and LOW on the bottom face (refer to figure 5). The HIGH rotary switch represents the most-significant digit or number of the ID CODE and the LOW rotary switch represents the least-significant digit or number of the ID CODE. Each 16-position rotary hexadecimal switch can be set to a value ranging between 0 and F.

2. Use a small screwdriver and rotate the arrow in the center of the rotary switch marked HI to the position of the most-significant digit or letter of the unit's ID CODE.

3. Use a small screwdriver and rotate the arrow in the center of the rotary switch marked LO to the position of the least-significant digit or letter of the unit's ID CODE.

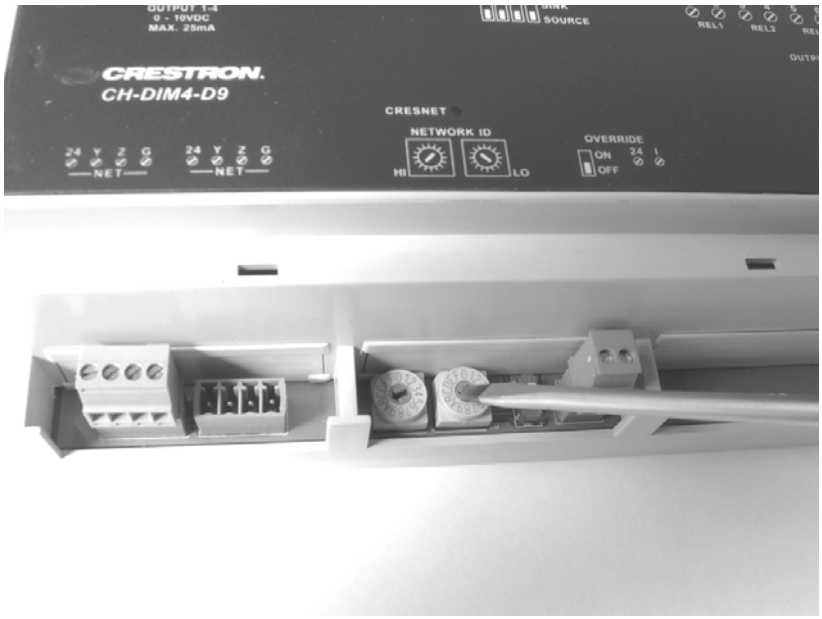

Figure 5: Rotary switches for NET-ID

Programming

The next subsections describe a sample SIMPL Windows program that utilizes a CH-DIM4-D9. It provides a description of how to actually create the SIMPL Windows program.

NOTE: The following descriptions assume that the reader has knowledge of SIMPL Windows. If not, please refer to the extensive help information provided with the software.

Minimal software requirements
SIMPL Windows 2.01.06
Ops. for CNX: 5.12.63X/W
Ops. for "2" series: C2-1014.cuz
check website www.crestron.com for latest OPS and software versions

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Configuration manager

A CH-DIM4-D9 needs to be defined as a **CNLDAB-4A** in Simpl Windows (Figure 6).

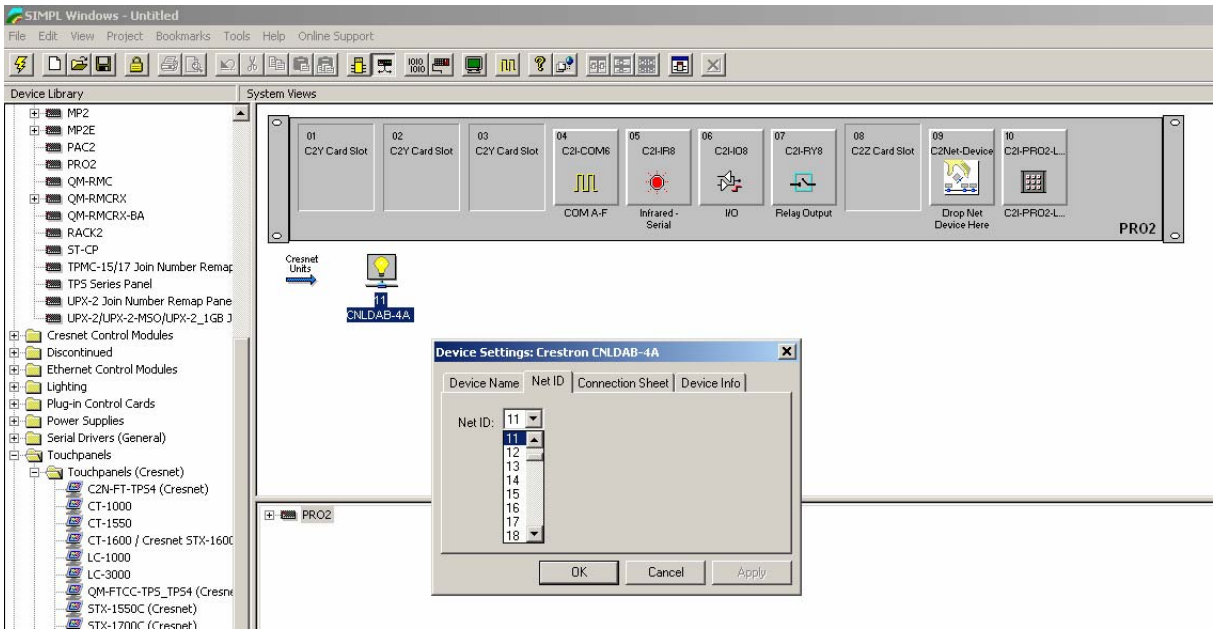

Figure 6: Hardware configuration CNLDAB-4A

Programming manager

The CNLDAB-4A symbol has 8 analog inputs (Figure 7). The top four signals correspond with the four analog outputs. The other four analog inputs correspond with the cut-off settings. If the Cut off relays are not programmed the relay's will automatically open when the matching analog output is <1V.

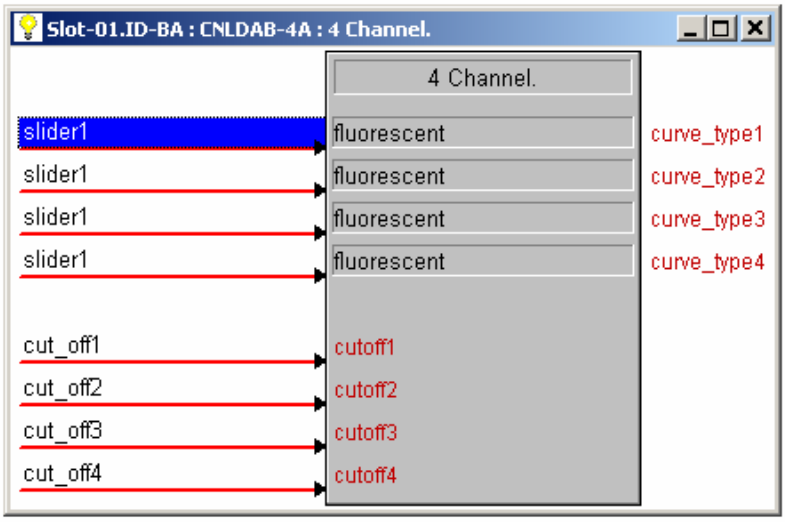

Figure 7: CNLDAB-4A

Example Program

Control four Analog Outputs and Cut-off Relays

This example illustrates how sliders on a touch panel control the four analog outputs of the CH-DIM4-D9. The Analog Initialize symbol sets the value on which the four relays should do the cut-off, in this case on 4 different values.

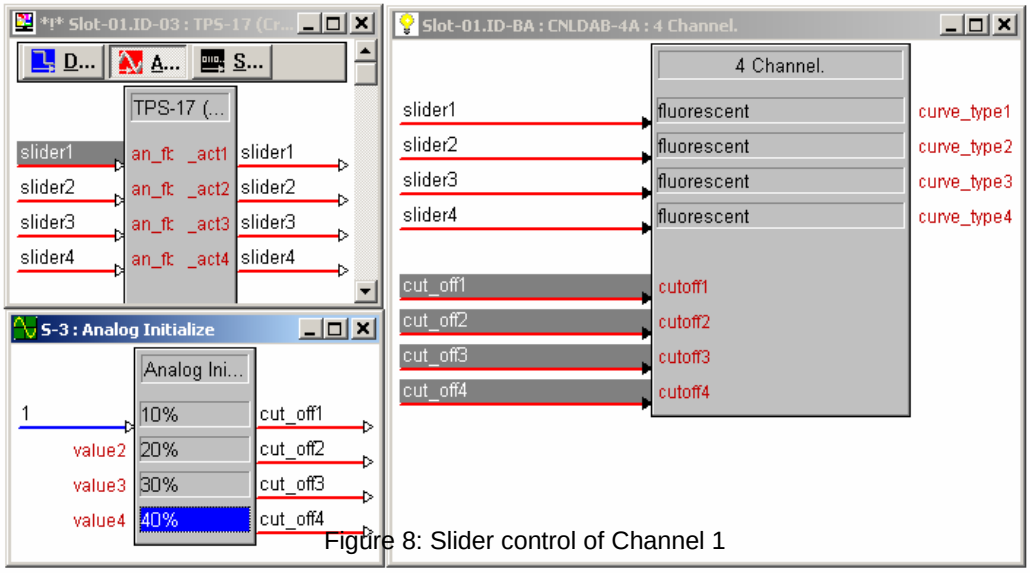

Figure 8: Slider control of Channel 1

Figure 8: CH-DIM4-D9 program example.

Problem Solving

Troubleshooting

Table 1 Provides corrective action for possible trouble situations.
If further assistance is required, please contact a Crestron Technical Support representative or submit your question on the Crestron True Blue On Line Service (www.crestron.com)

Table 1: Troubleshooting Guide

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
CH-DIM4-D9 does not function	DIM4-D9 is not communicating to the network.	Enter Viewport in SIMPL Windows. Press the F4 key to poll the network. Verify network connection to DIM4-D9 (it will report as a CNLDAB-4A).
Crestron swirl on the front is not lighting up (blue).	CH-DIM4-D9 is not receiving 24V power at the NET connector.	Verify "CRESNET Connections" on page 6. Confirm power is supplied to the unit.
Cuttoff relays are always closed, outputs are always set to 10VDC (100%)	The manual override is bridged or dipswitch is placed to ON (Up).	Verify that the manual override is not bridged and that the dipswitch is placed to the OFF position (Down)
Relayoutput 1-4 LED does not illuminate when control system sends commands	Cuttoff 1-4 not driven by proper signals, NET-ID is wrong.	Verify that the proper SIMPL symbols/signals are used to drive these Channels. Verify NET-ID on CH-DIM4-D9
CH-DIM4-D9 is not responding to network poll	Incorrect network wiring	Verify correct wirings to the network connectors (see page 6).

Further Inquiries

If after reviewing this Operations Guide on the CH-DIM4-D9, you cannot locate specific information or have questions, please take advantage of Crestron's award winning customer service team by calling:

- In Europe, call Crestron International at +32-15-50-99-50.
- In the UK, call Crestron UK at +44-208.439.7272.
- In Germany, call Crestron Germany at +49-731.96.28.10.
- In France, call Crestron France at +33-1-47-91-00-00.
- In Spain, call Crestron Iberica at +34.952.76.82.33
- In the Benelux, call Crestron Benelux at +32-15-50-40-70.